

Low-Cost Options for Moderate Levels of Mercury Control

Quarterly Progress Report
Reporting Period: April 1, 2005–June 30, 2005

Principal Author:
David C. Muggli

ADA-ES, Inc.
8100 SouthPark Way, Unit B
Littleton, Colorado 80120

Submitted: July 28, 2005

DOE Cooperative Agreement No.: DE-FC26-05NT42307

Report No. 42307R02

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
RESULTS OF WORK.....	2
Approach	2
Results and Discussion.....	2
Conclusion	3
MILESTONES NOT MET	4
COST AND SCHEDULE STATUS	4
SUMMARY OF SIGNIFICANT ACCOMPLISHMENTS	4
ACTUAL OR ANTICIPATED PROBLEMS OR DELAYS.....	4
DESCRIPTION OF TECHNOLOGY TRANSFER ACTIVITIES	4
APPENDIX.....	5

EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) Cooperative Agreement number DE-FC26-05NT42307 “Low-Cost Options for Moderate Levels of Mercury Control,” covers an award for funding a project that will investigate and test the Electric Power Research Institute’s (EPRI) patented TOXECON II™ process on two cold-side precipitator-equipped plants, and investigate and test the use of high-temperature sorbents on two hot-side precipitator-equipped plants. The DOE made this award through the National Energy Technology Laboratory (NETL) on February 17, 2005.

This reports covers the project activities for the second quarter of 2005 from April 1, 2005, to June 30, 2005.

During this period, project participants engineered and installed the silo foundation and the injection grids for the Entergy Independence Station, prepared and submitted for comments the test plan for Independence, and reviewed in detail the necessary requirements for the Independence testing installation. ADA-ES prepared the detailed schedule for the Independence testing, and continued solicitation efforts for additional project cost-share participants. ADA-ES also issued requests for quotes for moving the silo to Independence, and for various testing efforts during the testing period. EPRI continued efforts to put in place the cost-share agreements with committed EPRI members.

ADA-ES met with the injection grid installation contractor at the Independence Station to review the details of the grid installation and provide guidance during installation.

RESULTS OF WORK

Approach

This period covers the first full quarter of project activities, primarily the preparation work for the TOXECON II™ testing at Entergy's Independence Station, the first testing efforts for this program.

Results and Discussion

Entergy Independence Unit 2 is a test site for TOXECON II™ testing. This unit has a cold-side precipitator consisting of four identical precipitator enclosures (boxes) in a 2-by-2 stacked arrangement. Each precipitator is four fields wide by four fields deep. The TOXECON II™ configuration consists of injecting reagent upstream of the latter fields of the precipitator, thereby not contaminating the ash collected from the upstream fields with injected reagent.

During this quarter, ADA-ES finalized the design of the injection grid, and Entergy contracted with Whitehead Construction, Inc., for the fabrication and installation. ADA-ES was on site during the installation in April to provide technical direction of installation to Whitehead. Whitehead Construction completed the injection grid installation in April.

ADA-ES provided the silo foundation design loadings and requirements to Entergy, and Entergy contracted with Entech, Inc., to design the foundation and with PMI to do the installation. PMI completed the foundation installation in June.

ADA-ES issued a Purchase Order to Banner Industrial Construction Co. to remove the silo and feeder skids from Georgia Power Company's Plant Yates, transport the equipment to Independence, and install the equipment. Banner will do this work the middle of July.

Entergy purchased and installed a number of valves in the ash handling system to accommodate segregation of the reagent containing ash from the saleable ash.

ADA-ES issued the first project schedule Gantt chart to DOE on April 4, 2005.

ADA-ES also developed a list of additional potential project cost-share participants and sent an inquiry letter to the potential participants in mid-February. ADA-ES received a commitment from Arch Coal, Inc., for project cost-share funds. ADA-ES continues to pursue potential participants.

ADA-ES put in place a participation agreement with Xcel Energy in exchange for in-kind donation of particulate monitors to the project.

EPRI is continuing with efforts to arrange cost-share payments for all of the host sites and for other parties who have interest in the project. In addition to the host site utilities, we have

received commitments for project cost-share funds from Southern Company, DTE Energy, Oglethorpe Power Corporation, and Dynegy.

ADA-ES prepared and submitted an abstract for a presentation at the Power-Gen conference in December, and Power-Gen accepted the paper for presentation. The paper text is due in September, so we will have very little data to include in the paper, but we will have data and some results to present at the conference.

Conclusion

Overall, the project is progressing on schedule with no known concerns.

MILESTONES NOT MET

None.

COST AND SCHEDULE STATUS

See form SF-269A included in the appendix. Also included in the appendix is a project schedule.

SUMMARY OF SIGNIFICANT ACCOMPLISHMENTS

1. At Independence, Entergy installed the injection grids, silo foundation, and the ash system valves for segregating the saleable ash from the non-saleable ash/carbon from the ESP test fields.
2. ADA-ES prepared and submitted the test plan for the Independence testing.
3. ADA-ES began preparations for gathering the test equipment for the Independence testing.
4. EPRI continued efforts to put the cost-share agreements in place with the committed member utilities.

ACTUAL OR ANTICIPATED PROBLEMS OR DELAYS

None.

DESCRIPTION OF TECHNOLOGY TRANSFER ACTIVITIES

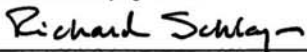
ADA-ES submitted an abstract for a presentation at the Power-Gen conference in December, and Power-Gen accepted the paper for presentation.

APPENDIX

FINANCIAL STATUS REPORT

(Short Form)

(Follow instructions on the back)

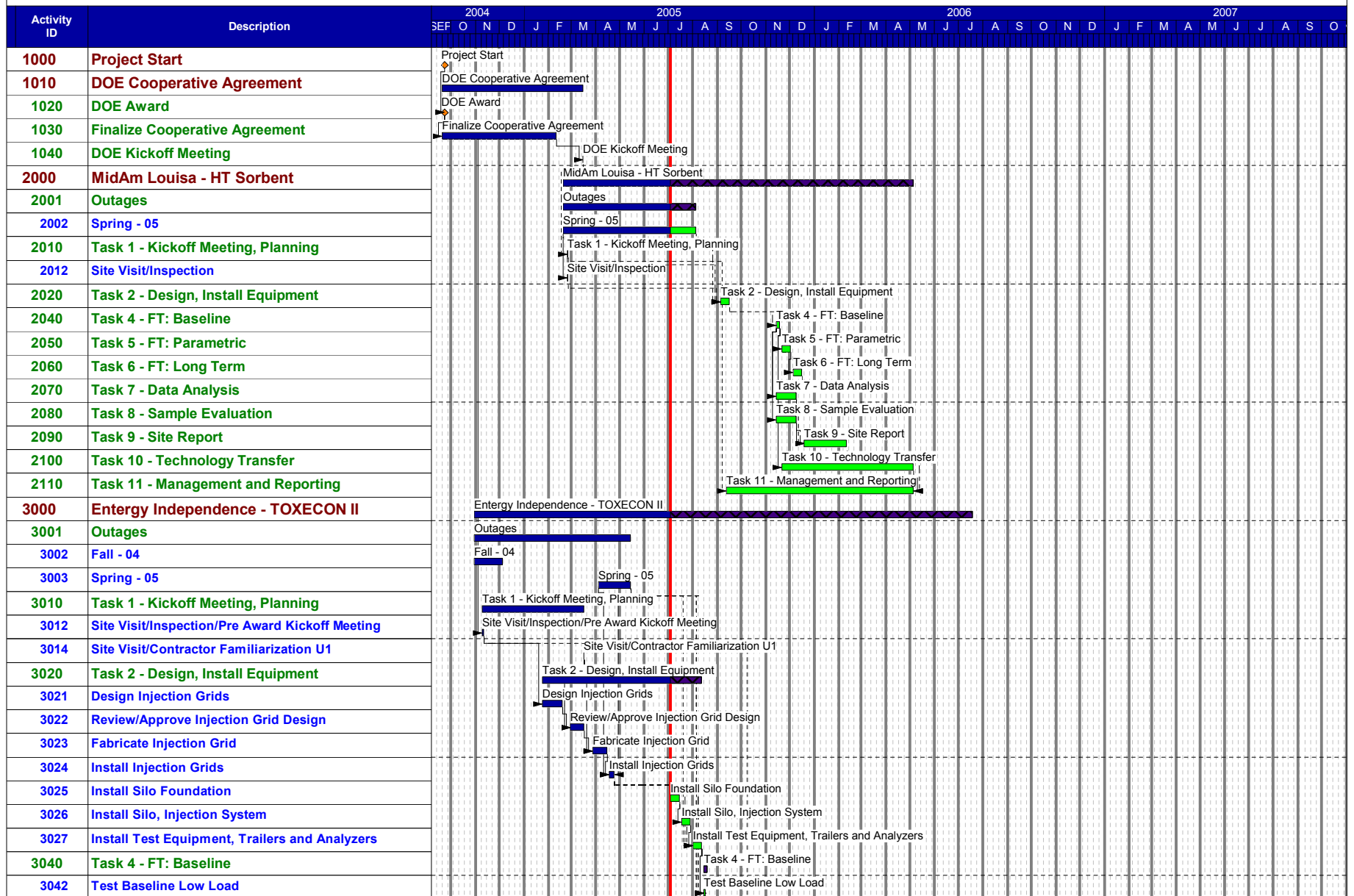
1. Federal Agency and Organizational Element to Which Report is Submitted DOE/NETL		2. Federal Grant or Other Identifying Number Assigned By Federal Agency DE-FC26-05NT42307		OMB Approval No. 0348-0039	Page 1 of 2 pages
3. Recipient Organization (Name and complete address, including ZIP code) ADA-ES, Inc. 8100 SouthPark Way Unit B Littleton, CO 80120					
4. Employer Identification Number 84-1341182		5. Recipient Account Number or Identifying Number		6. Final Report <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Basis <input type="checkbox"/> Cash <input checked="" type="checkbox"/> Accrual
8. Funding/Grant Period (See Instructions) From: (Month, Day, Year) 02/10/2005		To: (Month, Day, Year) 02/09/2008		9. Period Covered by this Report From: (Month, Day, Year) 04/01/2005	To: (Month, Day, Year) 06/30/2005
10. Transactions:		I Previously Reported	II This Period	III Cumulative	
a. Total outlays		79,411.63	76,679.20	156,090.83	
b. Recipient share of outlays		21,917.61	21,163.46	43,081.07	
c. Federal share of outlays		57,494.02	55,515.74	113,009.76	
d. Total unliquidated obligations				0.00	
e. Recipient share of unliquidated obligations				0.00	
f. Federal share of unliquidated obligations				0.00	
g. Total Federal share (Sum of lines c and f)				113,009.76	
h. Total Federal funds authorized for this funding period				3,946,323.00	
i. Unobligated balance of Federal funds (Line h minus line g)				3,833,313.24	
11. Indirect Expense	a. Type of Rate (Place "X" in appropriate box) <input checked="" type="checkbox"/> Provisional <input type="checkbox"/> Predetermined <input type="checkbox"/> Final <input type="checkbox"/> Fixed				
	b. Rate see attached	c. Base \$27,127.04	d. Total Amount \$49,552.16	e. Federal Share \$28,388.70	
12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.					
13. Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.					
Typed or Printed Name and Title Richard Schlager, Vice President			Telephone (Area code, number and extension) (303) 734-1727		
Signature of Authorized Certifying Official 			Date Report Submitted 7-26-05		

Previous Editions not Usable

Standard Form 269A# (REV 4-88)
Prescribed by OMB Circulars A-102 and A-110

Project Schedule

Project Manager - Dave Muggli



Data date 04JUL05
Run date 28JUL05

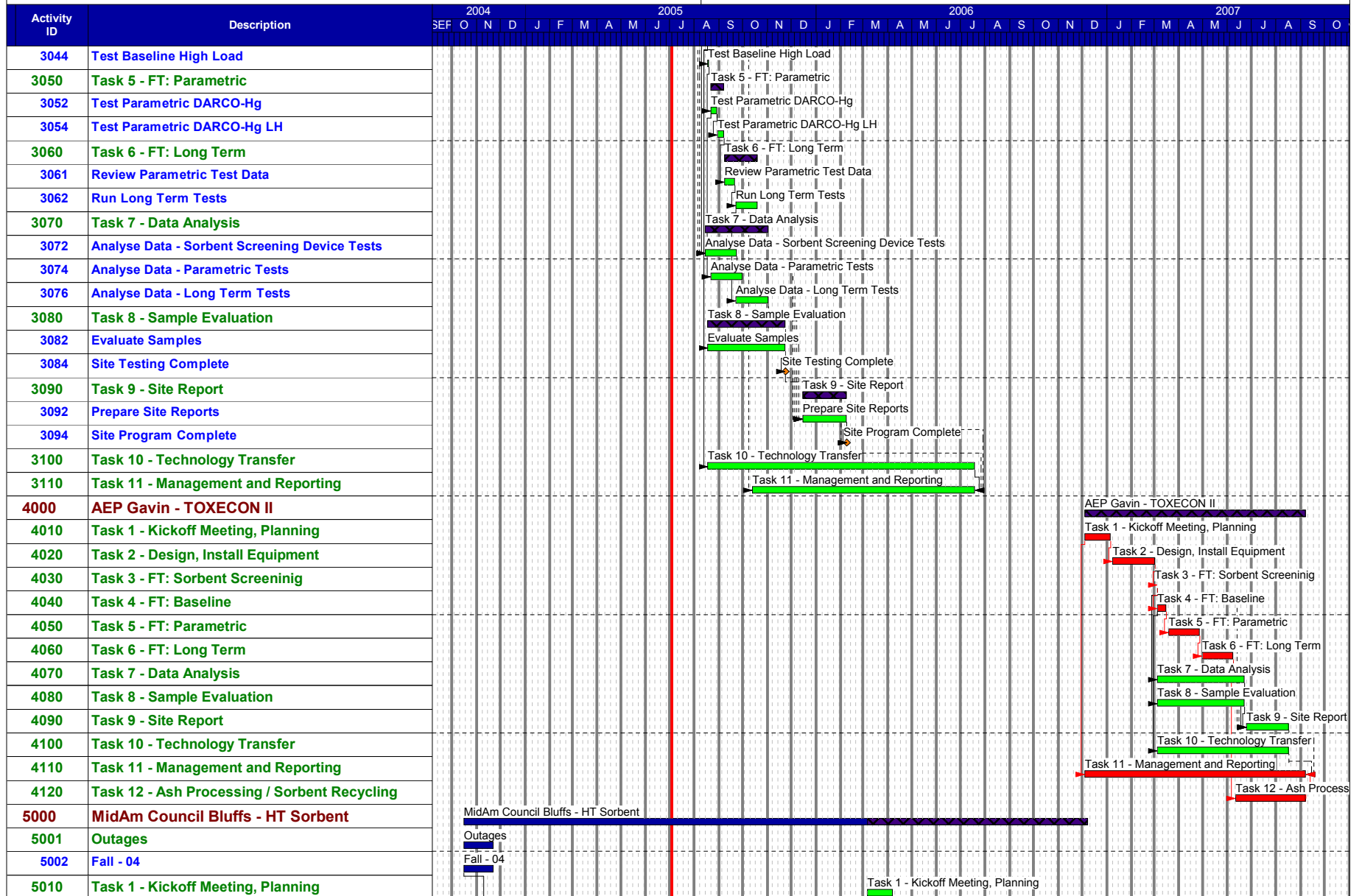
© Primavera Systems, Inc.

ADA-ES
7007 - DOE - HT Sorbents/Toxecon II
Page 1A

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Project Schedule

Project Manager - Dave Muggli



Data date 04JUL05
Run date 28JUL05

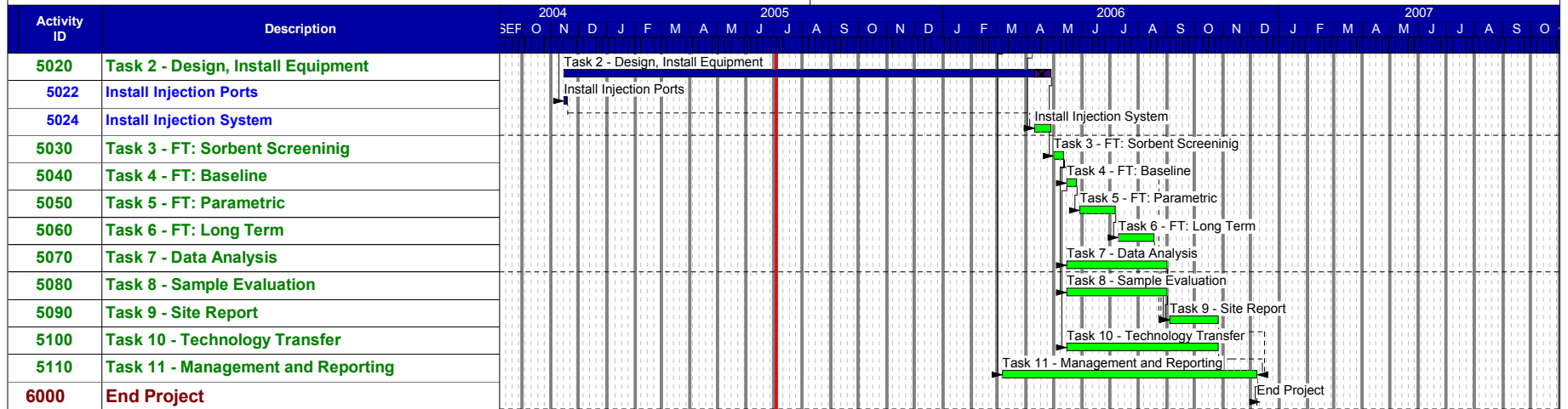
© Primavera Systems, Inc.

ADA-ES
7007 - DOE - HT Sorbents/Toxecon II
Page 2A

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Project Schedule

Project Manager - Dave Muggli



Data date 04JUL05
Run date 28JUL05

© Primavera Systems, Inc.

ADA-ES
7007 - DOE - HT Sorbents/Toxecon II
Page 3A

